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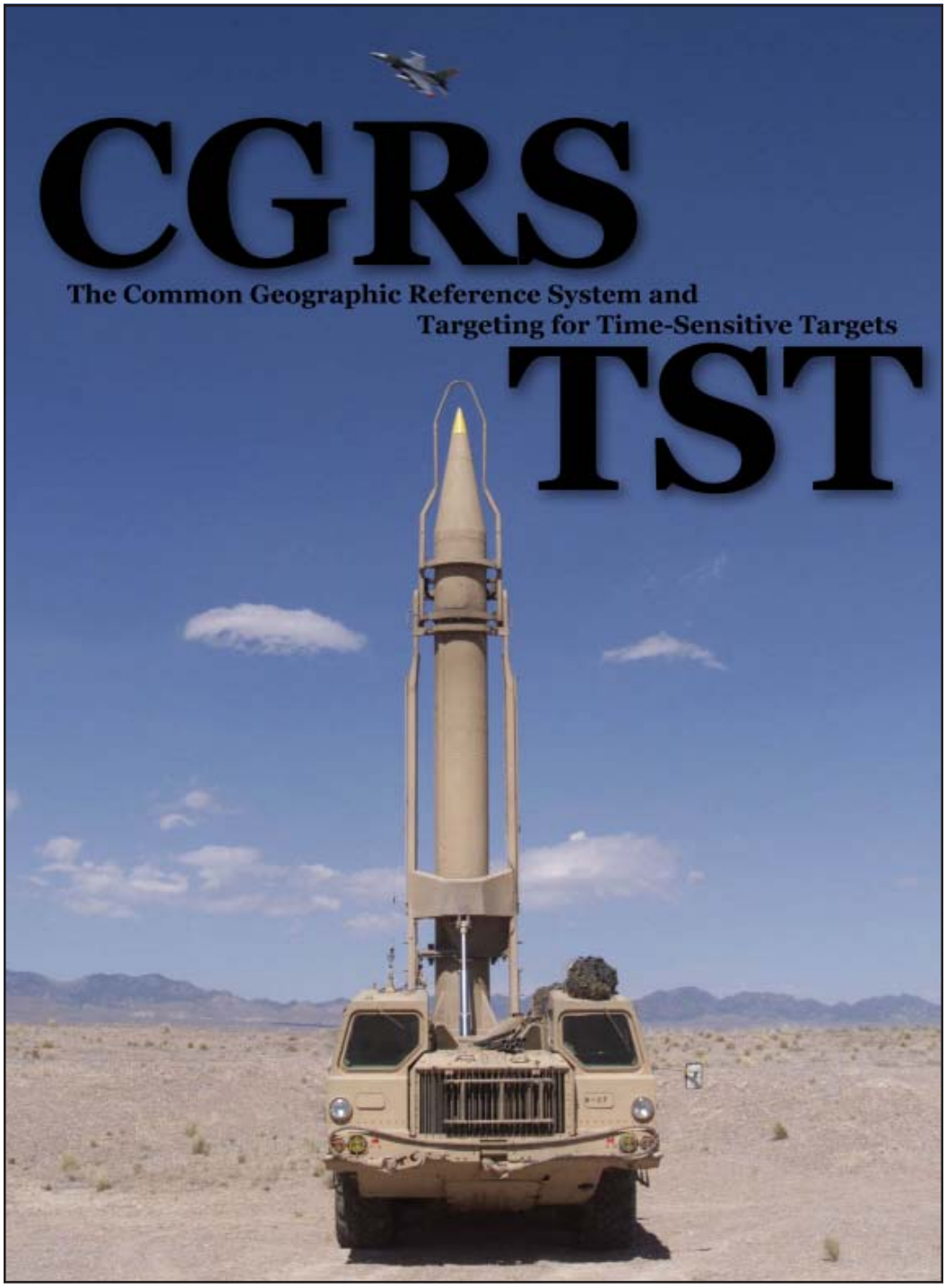

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THE AIR LAND SEA BULLETIN (ALSB)

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DIRECTOR'S COMMENTS - NEW DIRECTOR, NEW WAYS OF LOOKING AT, SOLVING INTEROPERABILITY PROBLEMS

This is my first issue as the Director of the Air Land Sea Application Center. In this issue you will see Time Sensitive Targeting and the Common Geographic Reference System applied in several different ways. As we have highlighted CGRS in this issue, the next few bulletins will profile some of our ongoing and recently completed work with related articles.

I have been at ALSA for one year and COL Mike Martinez, the deputy director has been here for just over six months. The pace has been steady and we continue to learn and appreciate the positive impact of ALSA Publications on the warfighter. Fortunately for us, our action officers are extremely talented. One of our recently departed officers wrote the following article on his perceptions concerning ALSA and its purpose. These are his thoughts and express how he felt about the value of our organization and his answers to some frequently asked questions about ALSA and its role. This article is very interesting and thought provoking. We hope you enjoy this article and thank you for your continued support.

DAVD E. PETERSEN, Colonel, USAF
Director

WHITHER ALSA

by
Lt Col Paul Moscarelli, USAF

One of the most unique units in the Department of Defense is a small, yet dynamic and highly effective organization called the Air Land Sea Application Center. The Air Land Sea Application Center, or ALSA, as it is more commonly known, is responsible for putting multi-Service tactics, techniques, and procedures in the hands of warfighters, planners, and support personnel as quickly as possible in order to enhance interoperability and increase the warfighting effectiveness of the joint force.

The overwhelming transformation now taking place in DoD makes this an opportune moment to examine the history of ALSA, its theoretical and practical reasons for its existence, and its possible future in our rapidly evolving joint environment.

Why does ALSA exist?

ALSA was created in the wake of the Vietnam War because our operations in south east Asia indicated a need for greater interaction between the Army and the Air Force. There was simply too much red tape and disagreement within the Army and Air Force staffs for them to be able to adapt to their unorthodox and flexible North Vietnamese opponents. ALSA exists because of the vision of the Chief of Staff of the Army and Chief of Staff of the Air Force who were presiding in 1975. The need for interaction between the services has not disappeared and neither has the unwieldy nature of the Service bureaucracies. Furthermore as joint warfare moves more toward the vision of the Secretary of Defense, there will be greater and greater requirements for interoperability of forces provided by the Services, and, therefore, for multi-Service TTP.

Organizational Theory

While the Chief of Staff of the Army and Chief of Staff of the Air Force may not have been organizational theorists, their actions were in perfect alignment with well-understood organizational theory. Since the 1960s, one method of effecting actions that a bureaucratic organization has difficulty implementing is to use an independent sub-organization structured for and dedicated to the task. These sub-organizations generally have very flat organizational charts and report directly to the senior leadership of the organization. For example, sub-organizations which “break through” existing barriers to innovation include industry “skunkworks” such as the one at Lockheed which produced the P-80 Shooting Star – the first jet aircraft, Have Blue – the first stealth aircraft, and the Mach 3+ SR71 reconnaissance aircraft. An example in the public sector is the Defense Advanced Projects Research Agency (DARPA), which played a key role in pushing forward numerous critical technologies to include un-

ALSA is an unyielding advocate for the warfighter, and this fact is evident in the results it achieves.

manned aerial vehicles, stealth platforms, and even the Internet.

In contrast to DARPA, ALSA's mission is not to break through technological barriers, but rather to break through barriers in the world of joint and Service doctrine. ALSA is the one organization that is open directly to the warfighter and other "worker bees" who support them. ALSA works to responsively meet the immediate needs of the warfighter with multi-Service TTP publications that help maximize the combat potential of the joint force. ALSA provides users with an unmatched rapid response capability to produce a publication in 30 days, six months, or one year depending on the urgency of the issue.

ALSA's Continuing Contribution

Culturally, ALSA is an unyielding advocate for the warfighter, and this fact is evident in the results it achieves. In FY 03, the efforts of ALSA's 14 joint staff officers resulted in the completion of twelve multi-Service publications. Among these ALSA undertakings include the production of an MTTP on high frequency automatic link establishment radios, which provides communications guidance on an alternative to over-taxed satellite communications systems. ALSA also rapidly responded to the need for publications on air defense of the United States and detainee operations. One ALSA project resulted in an MTTP on time sensitive targeting in direct response to JROC tasking.

In addition to its primary mission, ALSA also performs other functions:

· ALSA provides a "neutral territory" for subject matter experts (SMEs) from all Services and combatant commands, allowing them to focus on putting the best possible information on paper for use by the entire joint force.

· ALSA is an "honest broker" to adjudicate contentious issues.

· ALSA provides a forum for the interaction of the Service Doctrine Chiefs and serves as a vehicle for them to implement their combined vision. Service Doctrine Chiefs serve on the Joint Actions Steering Committee (JASC), which provides priorities and missions for ALSA. JASC meetings yield a genuinely joint senior officer perspective on doctrine that is unattainable in any single Service.

Life as the Bastard Child

While ALSA provides an invaluable service to the joint force, a recurring problem is that its basic nature as a dynamic sub-organization causes it to sometimes come under attack from action officers in other organizations. An example of how this works can be illustrated by again looking at the case of DARPA. Service acquisition officers are frequently hostile to DARPA. They feel like they do the "real" work, while DARPA personnel get the glory. In the words of one Air Force acquisition officer, "DARPA gets Services to do things for them, then takes all of the credit. DARPA has limited contract functions. They say, 'Hey Navy or Air Force, contract this out for me.' Also, DARPA shows capability but not supportability. DARPA does the sexy work, while Services get reprimanded for not getting a particular system to the field in a timely manner. Limited attention is paid to logistics outside of the regular acquisition system." There is no doubt some element of truth to these complaints, but in looking at the big picture, one sees that DARPA kept UAVs alive when no one else would. It had a significant role in development of the F-117 stealth fighter. DARPA created the Internet, which was originally called ARPAnet. One look at the current DARPA website would convince any unbiased observer of its value, and yet, if many Service acquisition action officers were handed an ax, they would take it to DARPA without a second thought. This is not because they are bad people; it's just that they see the world from the perspective of their own work experience.

Like DARPA, ALSA operates outside of the pyramidal bureaucratic organizational structure of the Service and joint doctrine communities. These pyramidal structures make sense to the action officers who work within them and provide a "comfort zone." At the same time, some of these action officers believe ALSA's openness and responsiveness to warfighters make their organizations appear slow-moving and inaccessible to the warfighter. Some action officers also find ALSA's existence disturbing because of the required service staffing of ALSA MTTP. As a result, these action officers can be expected to periodically mount attacks on ALSA. Some of their typical arguments are as follows:

1. "Joint pubs are better than multi-Service pubs. We don't need multi-Service pubs." Actually joint pubs are DIFFERENT than multi-Service pubs. Joint pubs become watered down as a result of the heavy compromise required to please the large number of Services and combatant commands. The CJCS signature on the document creates higher levels of resistance

on certain positions. In contrast, ALSA multi-Service pubs are produced responsively, and frequently in direct response to warfighter needs. Also, the joint process is accessible only though high-level sponsorship. It is very difficult for users to effect change – not so with the highly-accessible and responsive ALSA process.

2. "There is redundancy and inefficiency with the two systems and separate manning." In reality, there is greater EFFECTIVENESS with two processes (and for a fairly modest cost). As noted above, ALSA contributes openness, responsiveness, and appropriate level of detail for the user not available in the joint process.

3. "ALSA should go joint as a part of JFCOM J7." This move would have the same effect as dismantling ALSA altogether. ALSA's flat, dynamic, responsive organizational structure would be replaced with a pyramidal one, and ALSA action officers would most likely be shuffled around within JFCOM and farmed out as the crisis of the moment would dictate.

4. "ALSA is not producing multi-Service tactical level TTP for the warfighter. ALSA is migrating to joint operational level TTP." ALSA simply produces what is required by the warfighter. The strategic/operational/tactical paradigm is a theoretical construct. In reality, the distinction between the tactical and operational levels is artificial, and becoming increasingly obscured by the increasingly information intensive nature of joint warfare. ALSA pubs, as well as joint pubs necessarily contain information that pertains to all "levels of war."

5. "Many ALSA publications produced contain redundant/regurgitated material that was produced elsewhere or can be found in other joint publications." It is periodically necessary to repeat information in more than one place. This reality can be seen in both joint and Service doctrine libraries. Again, the needs of the warfighter dominate the pubs that ALSA produces, not an artificial and unachievable belief that information must be presented in one and only one place.

Reject the Ideas of Narrow-Minded Bureaucrats and Embrace a Greater Vision.

These arguments and others are periodically used by some O-4s and O-5s and their civilian equivalents to try to erase from existence an organization that was brought into existence by four-star generals who were grimly surveying lessons written in blood by a war that had rattled America in a way that no previous war had. These action officers have taken their position because they fail to understand that a certain level of dynamism and turbulence is good for an organization – they are the cure for unresponsive and stodgy bureaucracy. Fortunately, forward thinking general and flag officers have held on to the broader vision that sees the tremendous wisdom and value in creating and maintaining sub-organizations that can respond in ways that large bureaucracies can't. It takes effort at the highest levels to create an organization like ALSA, yet it could be dissolved at much lower levels where the information papers of entrenched staff officers have impact.

Whither ALSA?

As ALSA continues its efforts, a fundamental problem exists in that the tenure of an ALSA Director is very brief. The one-year tenure of the ALSA Director is a very short time for an individual to fully grasp the ALSA mission, the unique nature of the organization, the joint and Service doctrine development processes, and then with this understanding, to create and implement a strategic vision for the organization. It would be useful for Directors to pass an explanation of ALSA's unique characteristics, its position vis-à-vis the doctrine community, and explain ALSA's strategic vision. Hopefully, this would allow incoming directors and deputy directors to spin up more rapidly so they can maximize ALSA's contribution to the fight and continue to update ALSA's strategic vision.

The strategic vision of ALSA must take into account the need for the ALSA mission to adapt to the transformation of the US Military, and the technological advances being made in the joint and Service doctrine systems. This strategic vision has to take into account real-world needs that ALSA could meet better and faster than they are being met now, and importantly, new developments in the doctrine world – especially object-oriented libraries like Joint Doctrine Electronic Information System. ALSA needs to answer the question of how ALSA can use its unique structure and capability to best support warfighters.

ALSA's core task is to provide interoperability. Good questions to ask initially might be:

1. Should ALSA add to its current mission a mandate to do the first draft of joint

"Joint pubs are better than multi-Service pubs. We don't need multi-Service pubs." **Actually, joint pubs are DIFFERENT than multi-Service pubs.**

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TARGETING FOR TIME-SENSITIVE TARGETS - USING LESSONS LEARNED TO CREATE TTP

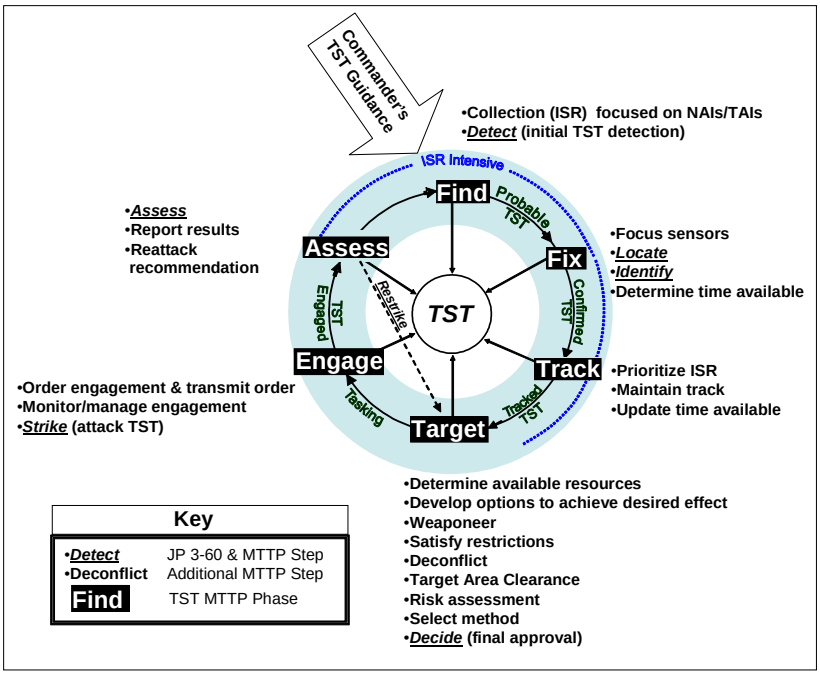


Figure 1. Time-Sensitive Targeting Process (Find, Fix, Track, Target, Engage, Assess -F2T2EA) Source - TST MTTP FM 3-60.1 MCRP 3-16D NTTP 3-60.1 AFTTP(I) 3-2.3

by
LtCol Pete "Toes" Bartos, USAF
ALSA Center

By the beginning of Operation Iraqi Freedom (OIF), a host of time-sensitive target (TST)-related tactics, techniques and procedures (TTP) initiatives had sprung up, many with conflicting vectors. The result was the lack of a joint standard for prosecuting TSTs and the potential for deadly confusion and ineffective operations on the battlefield. In March of 2003, the four Service doctrine center chiefs who comprise the Joint Actions Steering Committee (JASC) directed ALSA to develop multi-Service TTP (MTTP) for targeting TSTs, incorporating:

· JFCOM Joint Fires Initiative (JFI) TTP

· Draft Navy/Air Force Joint TST CONOPS

· US CENTCOM Counter-SCUD CONOPS

· OIF and OEF Lessons Learned

In addition to the JASC tasking, in August of 2003, the Joint Requirements Oversight Council (JROC) tasked ALSA and JFCOM to develop TST MTTP including JFI lessons & TTP.

The result of a year of hard work by over 100 subject matter experts from all Services, Combatant Commands, the United Kingdom, NATO, JFCOM, and the CIA, is a comprehensive guide to time-sensitive targeting operations that is superb for both operational and training use. This document was signed by the Services in April 2004, and directly supports the top ten priorities of the US military as set by the Secretary of Defenseand published by USJFCOM.

As with any ALSA MTTP, the TST MTTP fills in details where the joint publications are lacking information. The TST MTTP includes key lessons learned from US CENTCOM's highly successful TST operations during OIF. Major elements of this document include:

· Refined time-sensitive targeting process (Figure 1)

· Command and control (C2) for time-sensitive targeting

· SOF, other government agency, and multinational integration

· TST decision matrix (an enabler for rapid decisionmaking)

· Target data standards

· Planning, coordinating, organizing, and training

· Examples of cross-component TST prosecution

· Collaboration tools and TTP (including a detailed ADOCS section)

· Introduction of the Common Geographic Reference System (CGRS)

The TST subject matter experts wrestled with the JP 3-60 explanation of time-sensitive targeting process and what was actually being practiced and used in the field. The result was an amplification of the JP 3-60 process, structured in six phases (find, fix, track, target, engage and assess, or "F2T2EA"). The steps described in each phase of the time-sensitive targeting process include all of the JP 3-60 time-sensitive targeting cycle steps, as well as many additional steps. Several phases of this process, and the steps within the phases, may be accomplished in parallel. The Find, Fix, Track, and Assess Phases are intelligence, surveillance, and reconnaissance (ISR) intensive, while the Target and Engage Phases are typically labor, force, and decisionmaking intensive. Each phase of the time-sensitive targeting process is discussed in the TST MTTP, and the document

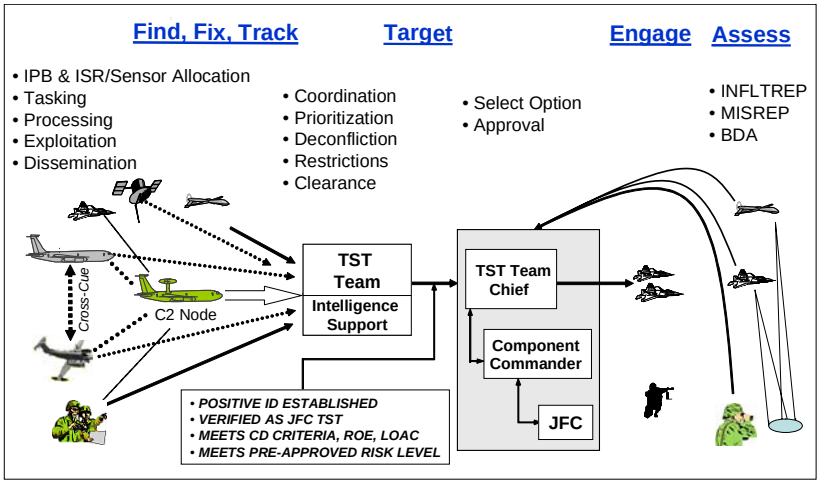
clearly identifies the specific tasks that can, and in some cases must, be accomplished prior to the tactical execution of the mission. The catalyst for the time-sensitive targeting process is the joint force commander's TST guidance and priorities.

The TST MTTP addresses the commander's objectives, intent, and guidance, which should be clear and concise, while being detailed enough to allow formulation of a TST decision matrix. A decision matrix allows component and on-scene commanders to reference the commander's intent quickly for each TST type and take timely, appropriate action. The TST decision matrix framework should include TST prioritization, desired effect, approval authority, restrictions, and acceptable risk level. Stating the desired effect on a target is critical, because killing or destroying a target might not be the only acceptable action. Capturing, isolating, disabling or discrediting might be effective options that could be timelier, or produce a more desirable outcome with less risk.

The reality of the contemporary operating environment is that the US military is not the sole battlespace presence, and may not control all assets required to prosecute a specific TST. The most effective and timely manner of prosecuting a TST often entails cross-component coordination using assets from the various components, nations, and even other government agencies. Figure 2 is a broad-brush example of potential players and actions in TST prosecution. If engagement authority is delegated by the JFC, the entire process might be rapidly accomplished in a single cockpit or by a single SOF team.

OEF and OIF experiences illustrate the point that time-sensitive targeting processes, C2, and execution will differ in response to campaign-specific external influences. External influences on the time-sensitive targeting process include the nature of the war as defined by the President of the United States and SECDEF objectives, the enemy, and operating area-specific geographic, political, and humanitarian issues. The time-sensitive targeting process must remain flexible because it may change significantly within the same operation. **A single time-sensitive targeting process cannot be effectively applied to all situations.**

Time-sensitive targeting operations must be effectively integrated into the overall campaign. Planning considerations include, but are not limited to: commander's guidance, intelligence preparation of the battlespace, databases, intelligence, surveillance and reconnaissance, operations, rules of engagement, collateral damage, command, control, communications, and computers architecture, and multinational operations, rehearsing and exercising. These considerations should be addressed concurrently to the maximum extent possible and coordinated across components and supporting agencies. The TST MTTP addresses planning considerations, as well as a host of other TST-related topics.



Example of Time-Sensitive Targeting Execution Flow

The TTP described in the document could be used for targets other than TSTs. Reactive targeting, such as targeting inside the air tasking cycle, or targeting mobile forces may also use similar processes. In addition, recovery of isolated personnel (combat search and rescue) could effectively use the time-sensitive targeting processes. Time-sensitive targeting is the most demanding example of targeting, and hence, the focus of the document.

The TST MTTP is set to migrate to Joint doctrine in the near future via the JP 3-60/2.01-1 consolidation and rewrite, and via JCS J7 action. NATO, the UK and Canada are all using the TST MTTP as a baseline for their own TST doctrine development. The ALSA TST MTTP carries the Service designations of FM 3-60.1, MCRP 3-16D, NTTP 3-60.1, and AFTTP(I) 3-2.3, and as of the printing of this article, hard copies should be available via your Service publication distribution centers. Appendix D (COMUSCENTAF Counter-SCUD CONOPS and Playbook – SECRET REL GBR/AUS), Appendix F (Time-Sensitive Targeting Collaboration Tools and TTP) and Appendix G (Common Geographic Refer-

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THE COMMON GEOGRAPHIC REFERENCE SYSTEM - FORMERLY KNOWN AS COMMON GRID REFERENCE SYSTEM

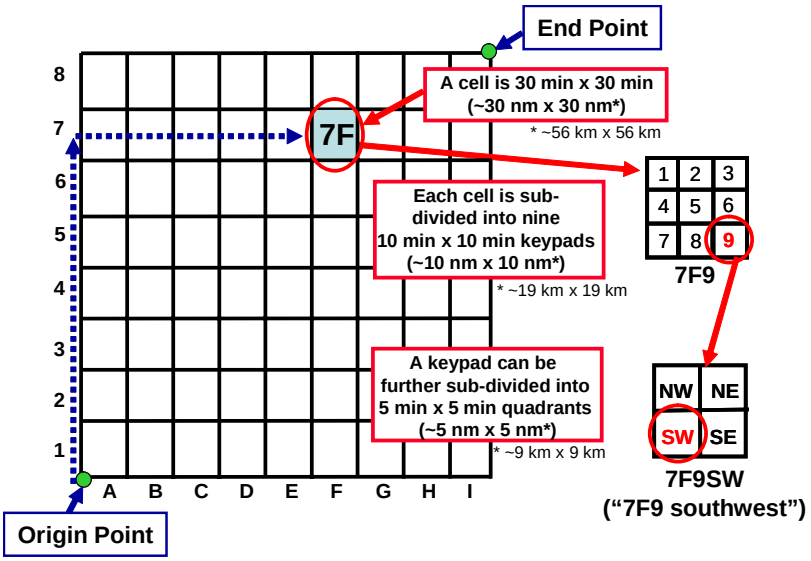

Figure 1. CGRS description and nomenclature from the TST MTTP

by
LtCol Pete "Toes" Bartos, USAF
ALSA Center

The Common Geographic Reference System (CGRS) was developed from Operation Iraqi Freedom tactics, techniques and procedures (TTP) and was hailed as one of the great success stories during OIF lesson learned conferences. CGRS was a key enabler of the "digital" battlefield and the common operational picture.

A CGRS is an administrative measure used to rapidly and clearly define geographical location for battlespace coordination, deconfliction, and synchronization. It provides a common language between the components, and simplifies communications.

CGRS is highly useful in facilitating rapid attacks on time-sensitive targets (TSTs), and for expediting deconfliction of friendly force locations. Because CGRS is integral to TST prosecution, the recently developed TST multi-Service TTP includes a stand-alone CGRS appendix, available online at www.alsa.mil, which introduces CGRS to multi-Service doctrine.

A CGRS consists of:
- An origin point (latitude/longitude) and end point.
- Cell (box) dimensions.
- A labeling system.

The CGRS is based upon the CENTCOM KI/CAS CONOPS model that utilized a kill box/keypad methodology, but the familiar telephone keypad is further subdivided into quadrants to accommodate slower aircraft, small units, and artillery (Figure 1).

It is important to note that the CGRS is a reference system, and is NOT a fire support coordinating measure (FSCM) or an airspace control measure (ACM). The CGRS provides the construct (a 2D system), and applications such as FSCMs and ACMs may be defined using CGRS (2D or 3D).

CGRS is especially useful in noncontiguous battlefields and in featureless terrain (desert, littoral, etc.). Historically, CGRS was used primarily when coordinating between air & ground forces, but the potential applications of the system are far greater. CGRS can be used to rapidly identify:
- General locations of friendly forces.
- Maneuver boundaries.
- Areas of intended attack.
- ACM or FSCM boundaries.
- High threat areas (i.e. SAM locations).
- ISR areas of interest (TAIs, NAIs, etc).
- Terrain or airspace orientation.
- Aircraft orbits.
- Geographic reference (GEOREF) locations.
- May be used to define FSCL (e.g. USFK).
- Maritime warfare areas (ASW and surface).

CGRS is not a panacea. It is not intended for defining points, nor is it optimized for:
- Specific locations of friendly forces.
- Air pictures (the "Bullseye" system is tried & proven).
- Defining lines/boundaries that are not grid-friendly (angled lines, curves, natural features, etc.) *Note:* USFK uses the Korea CGRS to define 45 degree lines.
- Describing natural terrain features.

GEOREFS remain an important method of rapidly communicating location information. However, CGRS may be blended with ground features for easier use. Examples of CGRS/GEOREF blending might include, "Cleared to engage targets east side of river in cell 4B" or "Remain west of north-south ridge in keypad 3A8" (Figure 2). As a technique, one might also describe the ridgeline in keypad 3A8 as residing in quadrants "3A8 West" (vice "3A8 Northwest and Southwest"). Similarly, the river in keypad 3A6 might be described as residing in "3A6 South" (vice "3A6 Southeast and Southwest").

In March of 2004, ALSA hosted a CGRS conference which revealed the following:

Some organizations are further along than others in CGRS training. A standard CONUS training grid implementation is underway, with a common defined origin point used by AWFC at Nellis AFB, JFCOM, and NSAWC at NAS Fallon. JFCOM is incorporating CGRS into joint exercises, is coding software to support CGRS information sharing and the Joint Targeting School has incorporated CGRS into its courseware. Navy's Top Gun, the USAF Weapons School, USMC's MAWTS-1 (which refers to CGRS as "cigars"), and NATO's Tactical Leadership Programme are all teaching CGRS in their syllabi.

Most issues identified at the March CGRS conference were resolved and included in the TST MTTP Appendix G (CGRS), which was signed by the four Services in April 2004. Significant issues that remain for joint force CGRS standardization are; (1) resolving different labeling conventions between Korea and the rest of the world, and, (2) investigating the utility of a single global grid such as the National Geospatial-intelligence Agency (NGA) proposal for using a modified World Geographic Reference System (WGRS) as a basis for a CGRS labeling. In the long term, a modified WGRS or other system may be a potential global replacement for CGRS, but testing is needed and further investigation and coordination with NGA and other nations is required.

There is wide spread agreement that a single CGRS standard is needed for the entire joint force and across all regional combatant commands. CGRS is a CSAF priority, was discussed at Marine-Air Force Warfighter Talks, and is a proposed topic for upcoming Army-Air Force Warfighter Talks. The four Services have agreed that the CGRS described in the TST MTTP Appendix will work for them, at least in the near term. Joint Forces Command J-8 is now the lead agent for joint force and combatant command CGRS standardization. CGRS is likely to be included in the rewrite of JP 3-09 and/or JP 3-60.

ALSA's work with basic CGRS development is finished. However, ALSA and subject matter experts are developing a Kill Box MTTP based on a CGRS construct.

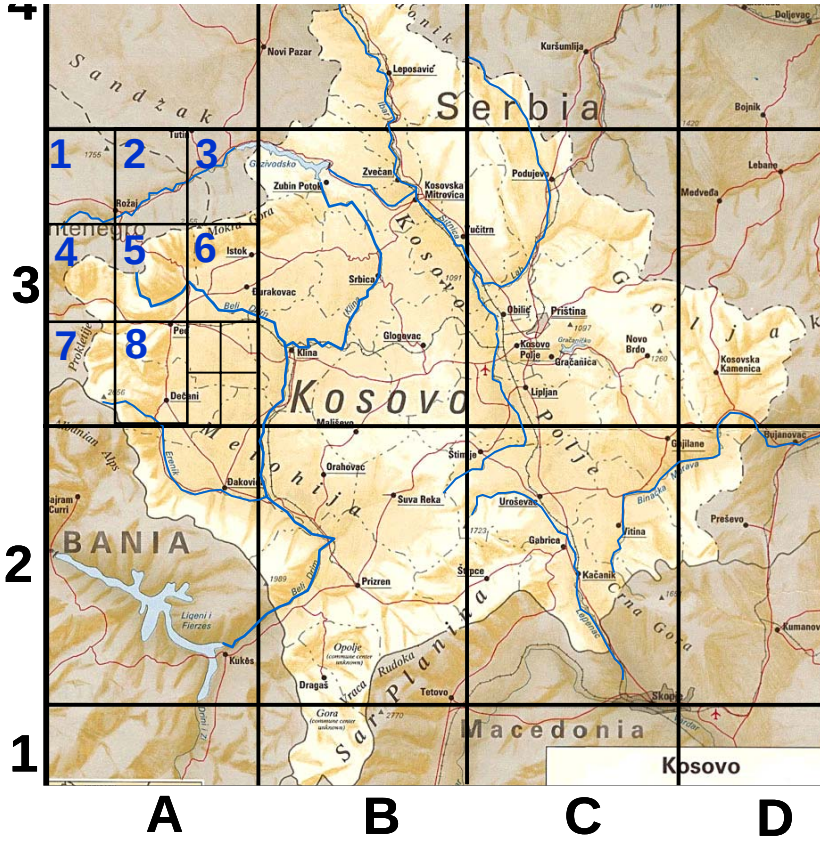

Figure 2. Hypothetical CGRS overlaid on Kosovo map

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pubs? As one Navy action officer remarked, "The way the process works right now, one organization drafts a publication, then the rest sit around for a couple of years trying to undo portions of the draft so that it will be acceptable to everyone." Using ALSA to create the initial draft of joint pubs could alleviate this problem.

2. Perhaps the most important question is, how can ALSA utilize its greatest strengths? Specifically, ALSA has a structure and capability that has allowed development of a culture where action officers unerringly see their primary responsibility as being to remain open to joint warfighters and provide them the most accurate information possible in as timely a manner as possible to create the greatest combat capability. ALSA does not try to justify budgets, justify jobs, trying to win little battles with other Services, or do any of the other necessary, but non-mission oriented items that distract large organizations from direct support to the warfighter. ALSA needs to study the changing environment, then develop the best possible ways it can support the warfighter in the coming years.

As the joint force confronts the unconventional foes of the 21st century, the answers to the above questions will point the way for ALSA to transform, so it may continue to provide the best possible support for those in the line of fire.

THE COMMON GEOGRAPHIC REFERENCE SYSTEM - HOW IT TRANSLATES IN THE MARITIME ENVIRONMENT

Looking toward potential future conflicts, a common reference system that can be used for land and maritime operations, such as the CGRS, will prove invaluable to Joint forces.

by
CDR Eric Kosten, US Navy

There is little doubt that Operation IRAQI FREEDOM (OIF) will serve as a benchmark for developing and refining future warfighting capabilities, policies and procedures. A fitting example of a benchmark is the 'kill box' concept used extensively during OIF. The kill box concept was highly successful and due predominantly to that success, the Air Land Sea Application (ALSA) Center has refined the reference system portion of the kill box concept into the Common Geographic Reference System (CGRS) depicted in another article in this periodical, pages 8-9. Due to its origins, the CGRS has been envisioned and employed as an overland reference system. However, the CGRS has great potential for application in the maritime environment as well. To this end, the experiences of recent combat operations indicate that overwater reference systems work very well to enhance force coordination and deconfliction. And looking towards potential future conflicts, a common reference system that can be simultaneously used for land and maritime operations, such as the CGRS, will prove invaluable to Joint forces.

OIF Kill Boxes-Genesis of the CGRS

Though the concept of kill boxes or grid reference systems is not new to warfare, the depth and breadth of utilization during OIF was unprecedented. The OIF kill box system was a simple reference grid that was common to and understood by CFMCC, CFACC, CFSOCC and CFLCC forces. The system supported the preponderance of the 41,000 – plus OIF sorties and was used for navigation, force deconfliction and control during a variety of missions including close air support, air interdiction, and airborne surveillance/reconnaissance, to name a few. For both air and ground forces, the kill box system was simple to learn and easy to use. In short, the OIF kill box construct worked very well to coordinate, deconflict and synchronize the air-ground battle.

Combining experiences from OIF with the key lessons from other events such as MILLENIUM CHALLENGE 2002 and Operation ENDURING FREEDOM, ALSA developed the CGRS in collaboration with the four Service doctrine centers and Service subject matter experts. The final version of the CGRS is described in the ALSA Time-Sensitive Targeting (TST) Multi-Service Tactics, Techniques and Procedures (MTTP) document[1]. The architecture and nomenclature of the CGRS are similar to the architecture and nomenclature of the OIF kill box system. From the TST MTTP, the CGRS is defined as:

"...an operational-level administrative measure used to coordinate geographical

areas rapidly for battle space deconfliction and synchronization."[2]

The TST MTTP also points out that the CGRS:

"...provides a common language between the components, and simplifies communications."[3]

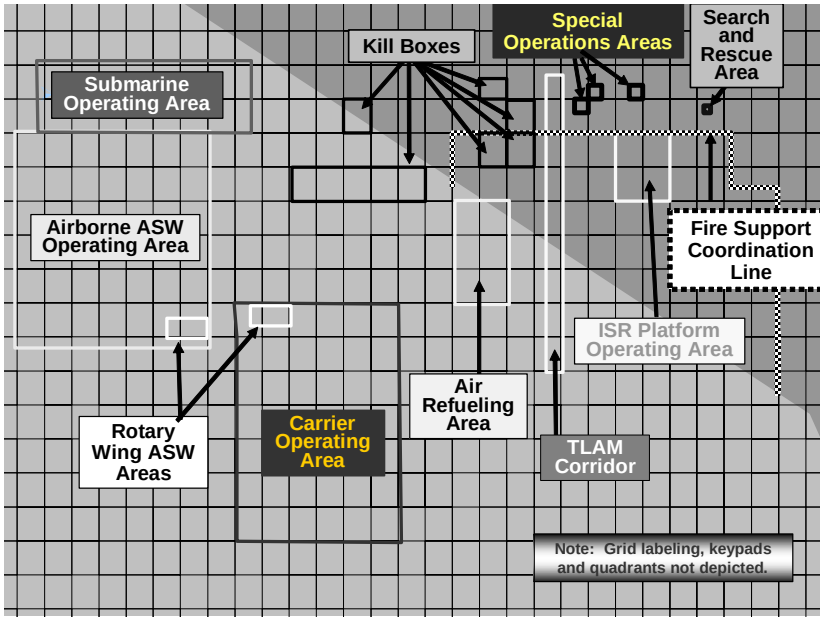
Hence, the CGRS is also intended for use in a similar manner as the OIF kill box grid system.

Overall, the CGRS equates to a hybrid of the OIF kill box system and due to the overland nature of the operations in OIF, the focus of the CGRS has followed suit towards the overland warfight. But recent operations, notably Operation ALLIED FORCE (OAF), indicate the viability of a grid reference system in the maritime environment.

Operation ALLIED FORCE

During the height of Operation ALLIED FORCE (March through June 1999), U.S. and Coalition air, surface and subsurface forces conducted anti-submarine and anti-surface warfare (ASW and ASUW) operations off the coast of Montenegro. To facilitate the 24/7 operations, a simple overwater grid system was established. The grid covered the southern portion of the Adriatic Sea and consisted of grid squares each roughly 10-by-10 nautical miles in dimension. The grid was used to define and periodically update blue force submarine operating areas, ASW areas, and other waterspace management zones for the numerous airborne, surface and subsurface forces involved. It was also used to coordinate various ASUW maneuvers. Similar to the overland kill boxes in OIF, this maritime grid had a simple labeling scheme, which allowed operating areas to be quickly assigned and reassigned to the air, surface and/or subsurface forces without having to perform the tedious process of reading, copying and verifying multiple latitude/longitude coordinates. Overall, the experiences of Operation ALLIED FORCE (OAF) point out that grid systems used overwater are easy to use and work very well to coordinate robust maritime operations. And, in retrospect, the CGRS could have easily substituted for the overwater grid system that was used in OAF.

Also of note during OAF, a separate grid reference system was used to define overland kill boxes well inland from the overwater grid described above. The two grid systems were different in construct but worked without conflict during OAF because of the large geographic distance between the two systems and more importantly, the forces involved in the overland effort were, for all practical purposes, independent of the forces involved in the maritime fight, and vice versa. Hence, the overland forces learned and used the overland grid reference system while the maritime forces learned and used the overwater grid. But when considering future potential conflicts, the luxury of 'exclusive' force apportionment may not be affordable and the use of separate grid systems will not be desirable.



Notional CGRS Application

Future Conflicts

The list of potential future conflicts that the United States may someday become involved in is formidable. The conflicts will likely be dynamic, large in scale, against capable opponents, and fought simultaneously overland and in the littorals. The maritime pieces of each potential conflict against opposing aircraft, ships and submarines look to be quite large and complex. Because of this, the involvement of all the Services in the maritime fight, in addition to any overland effort, will likely be the rule rather than the exception. Some may argue that the maritime fight is best left to maritime forces and capabilities, but consider the capabilities of, for example, the B-1, A-10 or JSTARS aircraft. These assets are traditionally not involved in the maritime, but it is easy to identify the potential of each platform to perform some aspect of anti-surface and/or anti-submarine warfare (e.g. a USAF A-10 aircraft attacking an opposing force

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THE COMMON GEOGRAPHIC REFERENCE SYSTEM - COALITION SPECIAL OPERATIONS FORCES DURING OI F

Operation IRAQI FREEDOM became the first instance where a SOF task force received *all* of its apportioned CAS (and some of its air interdiction support) from a single, dedicated Air Wing.

by
COL Robert Green, USAR

During the early pre-deployment planning phase of Operation IRAQI FREEDOM, Combined Joint Special Operations Task Force – West (CJSOTF-W) was given the mission of conducting ground-based time sensitive target (TST) interdiction in the western desert of Iraq, in support of the Combined Force Air Component Commander's (CFACC) Counter-SCUD mission. For the C-SCUD mission, the CFACC was designated by the Combined Force Commander (CFC) as the *supported commander* for the entire western portion of Iraq, which was assigned as his area of operations (AO). Therefore, for the first time, the CFACC was assigned operational control of an extensive piece of ground. CJSOTF-W was designated as the *supporting commander* to the CFACC for this mission, the first instance of a SOF Task Force directly supporting the air component commander. This C-SCUD mission would become the largest Coalition SOF operation in history.

To plan the C-SCUD mission, a Coalition Working Group was established consisting of planners from Air Combat Command (ACC), Central Command Air Force (CENTAF), other government agency (OGA) and coalition Special Forces (SF) planners from each of the US, British and Australian contingents comprising CJSOTF-W. In addition to traditional staff planning, a series of Live-Fly exercises were conducted at Nellis AFB to develop and test the TTPs and CONOPS required by the mission. These Live-Flys consisted of actual joint air-ground operations on the Nellis ranges conducted by portions of CJSOTF-W and CENTAF assets who would later deploy together to conduct the mission. A dedicated Air Wing was established for the C-SCUD mission, consisting of US Air National Guard, Air Force Reserve and British Air Force strike assets. This became the first instance where a SOF task force received *all* of its apportioned CAS (and some of its air interdiction support) from a single, dedicated

Air Wing.

During early planning, it was decided to use the recently developed CENTCOM Killbox Interdiction/Close Air Support (KI/CAS) CONOPS as the basis by which to identify TST locations on the ground. The KI/CAS CONOPS utilized a CGRS construct of 30 min x 30 min (30 nm x approximately 30 nm) cells, further subdivided into nine, 10 min x 10 min Keypads (see diagram as depicted previously in this publication)[1]. By the time of the second Live-Fly exercise, it became readily apparent that with the large number of SF Teams/Patrols on the ground and the large number of strike platforms in the air, that a more precise, fluid and nontraditional construct was also needed in order to coordinate and deconflict all Joint Fires in the AO as well as to delineate the boundaries of current operational areas being used by SF units.

The great majority of the CFACC's AO became designated as "Special Operations Area – West" or SOA-W. This area established the land boundaries within which CJSOTF-W was allowed to conduct operations. SOA-W was subdivided into several sectors corresponding to the various US and Coalition SF tactical headquarters. Within each of these sectors, each SF tactical unit was allowed to establish a Joint Special Operations Area or JSOA. The JSOAs were constructed at the Keypad level with the intent being to minimize the area of the JSOA within each sector, in order to allow aircraft maximum freedom of strike and maneuver. Traditional JSOA boundaries are constructed along geographic features and/or political boundaries, normally resulting in an irregular shape on the map. All CJSOTF-W JSOA boundaries were delineated using Keypads, which resulted in various arrangements of contiguous blocks of terrain of no set shape, allowing changes in shape and location due to operational necessity.

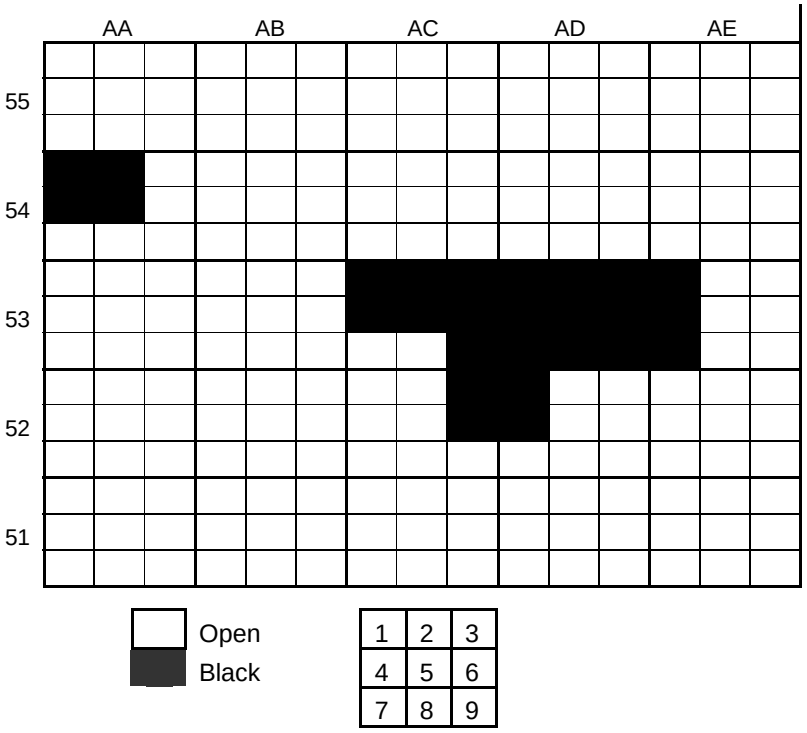
The procedure of changing the JSOA boundaries consisted of "opening" and "closing" designated Keypads, as mounted SF tactical units moved rapidly across the western desert- closing keypads to their front and opening those they had vacated to their rear. These changes could occur several times during the current Air Tasking Order (ATO) day. Such changes were kept to a minimum where possible, but the freedom was there to make such changes as often as every two hours. These boundary changes were made via thorough, preplanned procedures as designated in the C-SCUD CONOPS/ Playbook and the ATO Special Instructions (SPINS). SF Tactical HQs would transmit their desired JSOA changes to the CJSOTF Joint Fires Element (JFE) approximately 36 hours prior to release of the ATO for which the changes would be valid (see Figure 1, JSOA Change Request Format). However, as mentioned above, procedures were in place to make these changes much more rapidly. The CJSOTF-W JFE would transmit these requested changes to the Special Operations Liaison Element (SOLE) rep in the Combined Air Operations Center (CAOC) TST Cell, with a copy to the Combined Forces Special Operations Component Commander (CFSOCC). As the supported commander owning the AO, the CFACC had approval authority for these JSOA boundary change requests.

In this operation, the CGRS-delineated boundaries of the JSOAs also delineated the boundaries of all fire support coordination measures (FSCMs) such as no fire

AO West 99 Keypad Request - example

Please enter the start time in the upper yellow box
and the end time in the lower yellow box.
Please ensure that the keypad grid below reflects
your overall requirement for JSOAS during the validity period.

Request following keypads be open/black
from DTG (eg. 040800zDec02):
to DTG (eg. 050800zDec02):



JSOA Change Request Format

areas (NFAs), as well as airspace control measures (ACMs) and maneuver control measures (MCMs) within the JSOA. JSOA keypads were described by a special color designation of "BLACK," thus indicating their multipurpose function. Essentially, each entire JSOA was an NFA with designated altitude restrictions for overflying aircraft. Traditional NFAs were used on only three occasions during the operation: in one instance to protect a friendly asset, once to protect a displaced persons camp and once to protect a reconnaissance team surveilling an airfield target. It was undesirable for an SF tactical unit's JSOA to include this target's location, as it would unnecessarily restrict the freedom of maneuver of strike platforms around the target[2].

The CGRS construct was found to be very agile and was used for a number of other purposes. Keypad routes were constructed for the initial infiltration of mounted SF tactical units into the western desert of Iraq as they moved towards their respective sectors and initial JSOA locations. Keypad routes and boundaries were also utilized to control the passage of friendly forces from one sector into or through another sector. In a unique use of Keypads, long distance infiltration routes were established which facilitated an operation across Component boundaries. SF teams were inserted clandestinely into a remote desert airstrip within the CFACC's AO, but then moved overland along these preplanned Keypad routes into the Combined Force Land Component Commander's (CFLCC) AO to conduct strategic reconnaissance (SR) missions in support of CFLCC offensive operations. Just as with the "moveable" JSOAs, Keypads were closed ahead of these teams as they moved across the desert, while other Keypads were opened to their rear. Therefore, only small segments of the infil routes were "closed" at any one time and placed under restrictive coordination measures.

This utilization of a CGRS during initial SOF combat operations in OIF reflects the noncontiguous, nonlinear nature of the modern battlefield. SOF ground forces operating in this environment required the ability to rapidly move within their assigned AO in order to facilitate the timely identification and prosecution of TSTs. Boundaries of JSOAs and the FSCMs and ACMs protecting the forces within those JSOAs had to be quickly changeable and modified in a manner that was easily transmitted and visualized by higher HQ, the CAOC and any units providing dedicated fires support to those forces. The fidelity of the Killbox/Keypad CGRS structure allowed those control measures to be easily modified, particularly during rapid cross-country movement of mounted SF forces. The simplicity of the alphanumeric keypad designator allowed the JSOTF, CAOC, airborne C2 platforms and airborne strike platforms to rapidly communicate on boundary changes and identify those new boundaries from the cockpit. Rapid, decisive operations require speed in ground maneuver, C2 coordination and Joint Fires deconfliction. CGRS provided that critical solution for CJSOTF-W, facilitating numerous and concurrent SF operations within the deep battle space, resulting in complete mission success with absolutely zero incidences of friendly fire injury or fratricide.

The CGRS techniques used by CJSOTF-W, though they worked well, can certainly be improved upon in the future. The application of these techniques need not be associated only with SOF operations. There are more and potentially more varied opportunities for their use both at the operational and tactical level within any conventional force, be it air, land or sea. The current Killbox MTTP development at ALSA, along with ongoing Joint Fires doctrine initiatives relating to CGRS within the JFCOM J7, J8 and J9 will help to refine and further disseminate this crucial tool in the effort to finally digitize the battle space.

Editor's note:

COL Robert Green is the Assistant Chief of Staff at the United States Army John F. Kennedy Special Warfare Center and School. He served as the Joint Fires Element Director for CJSOTF-W during initial combat operations in OIF. Prior to attachment to CJSOTF-W, he served as the Director of Operations for SOCJFCOM.

Footnotes

[1] During OIF, CGRS was referred to as the Killbox/Keypad methodology since the TST MTTP had not been written yet.

[2] The recent addition of 5 min x 5 min quadrants to the CGRS construct (not available during OIF) will greatly aid in closer coordination of air support for SF tactical units.

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ence System) are available via electronic means only, and can be downloaded on the ALSA SIPR or NIPR Web sites.

ALSA would like to thank the large number of personnel who worked tirelessly on this project. While scores of personnel contributed greatly to this TST MTTP effort, special recognition is due to Army Col. Bobby Green of the US Army John F Kennedy Special Warfare Center and School, Lt. Col. Adam Legg of JFCOM's Joint Targeting School, Marine Corps Maj. Rob Terselic from I MEF, CDR "Opus" Padilla of NSAWC, Lt Col "Jethro" Backes of the USAF's C2 Warrior School (now the 505th TS), Mike Riggleman of the AFC2ISR Center, and Army Lt. Col. Karl Wingenbach from TRADOC Futures Center. Without the subject matter experts' effort, time and commitment from the start to the finish line, ALSA would never have been able to deliver such a relevant and useful publication to the warfighter in such a timely manner.

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submarine in the littorals). In similar fashion, maritime forces can play a large part in overland operations. This was clearly demonstrated in OIF with carrier air wings, TLAM-capable ships and submarines, and maritime patrol aircraft deeply involved in the overland fight. Because of the required land-force/maritime-force interdependency, it is easy to see that potential future conflicts will call for very high levels of Joint force integration and coordination. This is where the CGRS will help as a simple, Service-common grid system used for battlespace coordination, deconfliction and synchronization. The CGRS is designed to provide a common language between the components and simplify communications, and is capable of being simultaneously used overland AND in the surrounding maritime environment.

CGRS Application

Figure 1 depicts a CGRS superimposed over a notional joint operations area (JOA). The CGRS, applied in this manner, offers several advantages:

· As shown, the CGRS can simultaneously define various overland and overwater mission-specific areas including kill boxes, combat search and rescue (CSAR) areas, special operations areas, submarine operating areas, carrier operating areas, and maritime patrol operating areas, to name a few. Geographic deconfliction of the areas from one another is straightforward since all are built from the same reference system.

· The CGRS labeling system simplifies communications and allows the various areas, especially 'temporary-use' areas (CSAR areas for example) to be rapidly identified, activated and subsequently deactivated, or moved.

· Asset synchronization and cross-service integration is increased because all forces are using a common battle space reference/language.

· Though figure 1 depicts a traditional 'linear' battlefield, the CGRS is highly applicable to a non-linear, distributed battle.

Way Ahead

The recent combat operations of OIF and OAF indicate the validity of using grid reference systems overland and in the littorals, and the CGRS stands ready for use by the operational warfighter as a superb tool for total battlespace (overland and overwater) coordination, deconflction and synchronization. Presently, the CGRS is employed over the Nellis Air Force Base and Naval Air Station Fallon ranges to define air combat training areas. Also, United States Joint Forces Command is planning limited objective experiments to explore various applications of the CGRS. However, further training and experimentation with the CGRS in robust Joint environments (large-scale war games and exercises, for example) will help expose this common reference system to all Services and communities and help to fully develop its advantages.

Endnotes

[1] ALSA Center: Multi-Service Tactics, Techniques and Procedures for Targeting Time-Sensitive Targets document is available in PDF format at http://www.alsa.mil.

[2] ALSA Center: Multi-Service Tactics, Techniques and Procedures for Targeting Time-Sensitive Targets, (Air Land Sea Application Center: 20 April, 2004), G-1.

[3] ALSA Center, G-1.

ALSA PROJECTS UPDATE
CURRENT ALSA PUBLICATIONS

TITLE	DATE	PUB #	DESCRIPTION
ADUS: *MTTP for AIR DEFENSE of the United States* **Classified SECRET/RELCAN**	22 MAR 04	A: FM 3-01.1 N: NTTP 3-26.1.1 AF: AFTTP(I) 3-2.50	This MTTP supports planners, warfighters, and interagency personnel participating in air defense of the US by providing planning, coordination, and execution information. Pub is primarily focused at the tactical level. Includes Operation NOBLE EAGLE and Clear Skies Exercise lessons learned. **Assess**: 1 Sep 05 (18mo); 1 Mar 07 (3yr) **POC: Team E** alsae@langley.af.mil
AMCI: *Army and Marine Corps Integration in Joint Operations*	21 NOV 01 (**Transitions to the Army in NOV 04**)	FM 3-31.1 (FM 90-31) MCWP 3-36	Describes the capabilities and limitations of selected Army and Marine Corps organizations and provides TTP for the integrated employment of these units in joint operations. The example used is C2 of a notional Army Brigade by a MEF or C2 of a MEB by an Army Corps. **Current Status:** Scheduled for revision in November 2004 (3yr). (New POC is CAC/CADD, Ft. Leavenworth) **ALSA transition POC: Team F** alsaf@langley.af.mil
ARM-J: *Antiradiation Missile Employment in a Joint Environment* **Classified SECRET**	JUL 02		This publication has been incorporated into the JSEAD publication.
AVIATION URBAN OPERATIONS: *Multi-Service Procedures For Aviation Urban Operations*	15 APR 01	FM 3-06.1 (FM 1-130) MCRP 3-35.3A NTTP 3-01.04 AFTTP(I) 3-2.29	MTTP for the tactical-level planning and execution of fixed- and rotary-wing aviation urban operations. **Current Status:** Program Approval **POC: Team E** alsae@langley.af.mil
BREVITY: *Multi-Service Brevity Codes* **Distribution Restricted**	05 JUN 03 **Under Revision**	FM 3-54.10 (FM 3-97.18) MCRP 3-25B NTTP 6-02.1 AFTTP(I) 3-2.5	A dictionary of multi-Service use brevity codes to augment JP 1-02, *DOD Dictionary of Military and Associated Terms*. This pub standardizes air-to-air, air-to-surface, surface-to-air, and surface-to-surface brevity code words in multi-Service operations. **Current Status:** Program Development. JWG #1 4-6 Jan 05 **POC: Team F** alsaf@langley.af.mil
COMCAM: *Multi-Service Tactics, Techniques, and Procedures for Joint Combat Camera Operations*	15 MAR 03	FM 3-55.12 MCRP 3-33.7A NTTP 3-13.12 AFTTP(I) 3-2.41	This publication fills the void that exists regarding combat camera doctrine, and assists JTF commanders in structuring and employing combat camera assets as an effective operational planning tool. Assess: 1 Sep 04 (18mo); 1 Mar 06 (3yr) **POC: Team C** alsac@langley.af.mil
EOD: *Multi-Service Procedures for Explosive Ordnance Disposal in a Joint Environment*	15 FEB 01	FM 4-30.16 MCRP 3-17.2C NTTP 3-02.5 AFTTP(I) 3-2.32	Provides guidance and procedures for the employment of a joint explosive ordnance disposal (EOD) force. The manual assists commanders and planners in understanding the EOD capabilities of each Service. **Current Status**: Awaiting EOD transformation study results. **POC: Team B** alsab@langley.af.mil
HAVE QUICK	MAY 04	A: FM 6-02.771 M: MCRP 3-40.3F N: NTTP 6-02.7 AF: AFTTP(I) 3-2.49	Will simplify planning and coordination of HAVE QUICK radio procedures and responds to the lack of HAVE QUICK TTP throughout the Services. Additionally, it provides operators information on multi-Service HAVE QUICK communication systems while conducting home station training or in preparation for interoperability training. Assess: 1 Nov 05 (18 mo); 1 May 07 (3yr) **POC TEAM C** alsac@langley.af.mil
HF-ALE: *Multi-Service Procedures for High Frequency-Automatic Link Establishment (HF-ALE) Radios*	01 SEP 03	FM 6-02.74 MCRP 3-40.3E NTTP 6-02.6 AFTTP(I) 3-2.48	Standardizes high power and low power HF-ALE operations across the Services and enable joint forces to use HF radio as a supplement / alternative to overburdened SATCOM systems for over-the-horizon communications. Assess: 1 Mar 05 (18mo); 1 Sep 06 (3yr) **POC: Team C** alsac@langley.af.mil
ICAC2: *Multi-Service Procedures for Integrated Combat Airspace Command and Control*	30 JUN 00 **(Will be reassessed upon publication of JP 3-52)**	FM 3-52.1 (FM 100-103-1) MCRP 3-25D NTTP 3-52.1(Rev A) AFTTP(I) 3-2.16	Provides detailed TTP for airspace C2 to include specialized missions not covered in JP 3-52, *Doctrine for Joint Airspace Control in a Combat Zone.* Includes specific information on interfaces and communications required to support integrated airspace control in a multi-Service environment. **Current Status**: Attempting to incorporate information into JP 3-52. Pub will be retained until it is determined information is accepted. **POC: Team D** alsad@langley.af.mil
IDM: *Multi-Service Tactics, Techniques, and Procedures for Improved Data Modem Integration* **Distribution Restricted**	30 MAY 03	FM 6-02.76 MCRP 3-25G NTTP 6-02.3 AFTTP(I) 3-2.38	Provides digital connectivity to a variety of attack and reconnaissance aircraft; facilitates exchange of near-real-time targeting data and improves tactical situational awareness by providing a concise picture of the multi-dimensional battlefield. Assess: 1 Nov 04 (18mo); 1 May 06 (3yr) **POC: Team C** alsac@langley.af.mil

Current as of: 8/30/2004

ALSA PROJECTS UPDATE
CURRENT ALSA PUBLICATIONS

TITLE	DATE	PUB #	DESCRIPTION
IFF: *MTTP for Mk XII IFF Mode 4 Security Issues in a Joint Integrated Air Defense System* **Classified SECRET**	11 DEC 03	FM 3-01.61 MCWP 3-25.11 NTTP 6-02.4 AFTTP(I) 3-2.39	The publication educates the warfighter to security issues associated with using the Mark XII IFF Mode 4 Combat Identification System in a joint integrated air defense environment. It captures TTP used today by the warfighter that can address those security issues. **Current Status**: Assess: 1 Jun 05 (18mo); 1 Dec 06 (3yr) **POC: Team A** alsaa@langley.af.mil
JAAT: *Multi-Service Procedures for Joint Air Attack Team Operations* **Revision is Distribution Restricted**	03 JUN 98		This publication has been incorporated into the JFIRE publication.
JAOC / AAMDC: *Multi-Service Procedures for Joint Air Operations Center and Army Air and Missile Defense Command Coordination* **Distribution Restricted**	22 Mar 04	FM 3-01.20 AFTTP(I) 3-2.30	Addresses coordination requirements between the Joint Air Operations Center and the Army Air and Missile Defense Command. Assists the JFC, JFACC, and their staffs in developing a coherent approach to planning and execution of AMD operations. **Current Status:** Awaiting print. Assess: 1 Sep 05 (18mo); 1 Mar 07 (3yr) **POC: Team D** alsad@langley.af.mil
JATC: *Multi-Service Procedures for Joint Air Traffic Control*	17 JUL 03	FM 3-52.3 (FM 100-104) MCRP 3-25A NTTP 3-56.3 AFTTP(I) 3-2.23	Ready reference source for guidance on ATC responsibilities, procedures, and employment in a joint environment. Discusses JATC employment and Service relationships for initial, transition, and sustained ATC operations across the spectrum of joint operations within the theater or area of responsibility (AOR). Assess: 1 Jan 05 (18mo); 1 Jul 06 (3yr) **POC: Team F** alsaf@langley.af.mil
J-FIRE/JAAT: Multi-Service Procedures for *Joint Application of Firepower* **Distribution Restricted**	01 NOV 02 **(Under Revision)**	FM 3-09.32 (FM 90-20) MCRP 3-16.6A NTTP 3-09.2 AFTTP(I) 3-2.6	A pocketsize guide of procedures for calls for fire, CAS, and naval gunfire. Provides tactics for joint operations between attack helicopters and fixed-wing aircraft performing integrated battlefield operations. **Current Status**: Command Approval **POC: Team A** alsaa@langley.af..mil
JIADS: *Multi-Service Procedures for a Joint Integrated Air Defense System* **Distribution Restricted**	08 JUN 01 **(Under Revision)**	FM 3-01.15 MCRP 3-25E NTTP 3-01.8 AFTTP(I) 3-2.31	This publication provides joint planners with a consolidated reference on Service air defense systems, processes, and structures, to include integration procedures. The revision will be re-titled to "Multi-Service Tactics, Techniques, and Procedures for an Integrated Air Defense System (IADS)." **Current status:** Command Approval **POC: Team D** alsad@langley.af.mil
JSEAD/ ARM-J: *Suppression of Enemy Air Defenses* **Classified SECRET**	28 May 04	FM 3-01.4 MCRP 3-22.2A NTTP 3-01.42 AFTTP(I) 3-2.28	This publication fills a planning and employment void not captured in existing Joint Tactics Techniques and Procedures. It contributes to Service interoperability by providing the JTF and subordinate commanders, their staffs, and SEAD operators a single, consolidated reference. Additionally, this publication discusses the employment of intelligence, surveillance, and reconnaissance assets, electronic and destructive attack weapons systems to destroy/disrupt/degrade the enemy's air defenses. It also incorporates appropriate anti-radiation missile information. Assess: 1 Nov 05 (18 mo); May 07 (3yr) **POC: Team A** alsaa@langley.af.mil
JSTARS: *Multi-Service Tactics, Techniques, and Procedures for the Joint Surveillance Target Attack Radar System* **Distribution Restricted**	17 MAR 03	FM 3-55.6 (FM 90-37) MCRP 2-1E NTTP 3-55.13 (Rev A) AFTTP(I) 3-2.2	This publication provides procedures for the employment of the Joint Surveillance Target Attack Radar System (JSTARS) in dedicated support to the JFC. Revision will be unclassified. The unclassified revision describes multi-service TTP for consideration and use during planning and employment of the JSTARS. Assess: 1 Sep 04 (18mo); 1 Mar 06 (3yr) **POC: Team D** alsad@langley.af.mil
JTF IM: *Multi-Service Procedures for Joint Task Force Information Management* **Distribution Restricted**	10 SEP 03	FM 6-02.85 (FM 101-4) MCRP 3-40.2A NTTP 3-13.1.16 AFTTP(I) 3-2.22	This publication describes how to manage, control, and protect information in a JTF headquarters conducting continuous operations. Assess: 1 Mar 05 (18mo); 1 Sep 06 (3yr) **POC: Team C** alsac@langley.af.mil
JTF Liaison Officer Integration: *Multi-Service Tactics, Techniques, And Procedures For Joint Task Force (JTF) Liaison Officer Integration*	27 JAN 03	FM 5-01.12 (FM 90-41) MCRP 5-1.B NTTP 5-02 AFTTP(I) 3-2.21	This publication defines liaison functions and responsibilities associated with operating a JTF. Awaiting results of 18 month transition assessment – looking to incorporate contents into JP 5-00.2. Assess: 15 Jul 04 (18mo); 27 Jan 06 (3yr) **POC: Team B** alsab@langley.af.mil

ALSA PROJECTS UPDATE
CURRENT ALSA PUBLICATIONS

TITLE	DATE	PUB #	DESCRIPTION
JTMTD: *Multi-Service Procedures Joint Theater Missile Target Development* **Distribution Restricted**	11 Nov 03	FM 3-01.51 (FM 90-43) NTTP 3-01.13 AFTTP(I) 3-2.24	The JTMTD publication documents TTPs for threat missile target development in early entry and mature theater operations. It provides a common understanding of the threat missile target set and information on the component elements involved in target development and attack operations. Assess: 1 May 05 (18mo); 1 Nov 06 (3yr) **POC: Team D** alsad@langley.af.mil
NLW: *Tactical Employment of Nonlethal Weapons*	15 JAN 03	FM 3-22.40 (FM 90-40) MCWP 3-15.8 NTTP 3-07.3.2 AFTTP(I) 3-2.45 USCG Pub 3-07.31	This publication supplements established doctrine and TTP and provides a source of reference material to assist commanders and staffs in planning/coordinating tactical operations. It incorporates the latest lessons learned from real world and training operations, and examples of TTP from various sources. Assess: 15 Jul 04 (18mo); 15 Jan 06 (3yr) **POC: Team B** alsab@langley.af.mil
PEACE OPS: *MTTP for Peace Operations*	26 OCT 03	FM 3-07.31 MCWP 3-33.8 AFTTP(I) 3-2.40	This publication provides tactical level guidance to the warfighter for conducting peace operations. Assess: 1 Apr 05 (18mo); 1 Oct 06 (3yr) **POC: Team E** alsae@langley.af.mil
REPROGRAMMING: *Multi-Service Tactics, Techniques, and Procedures for Reprogramming of Electronic Warfare and Target Sensing* **Distribution Restricted**	06 JAN 03	FM 3-51.1 (FM 34-72) MCRP 3-40.5B NTTP 3-13.1.15 AFTTP(I) 3-2.7	This publication supports the JTF staff in the planning, coordinating, and executing of reprogramming of electronic warfare and target sensing systems as part of joint force command and control warfare operations. Assess: 15 Jul 04 (18mo); 06 Jan 06 (3yr) **POC: Team G** alsag@langley.af.mil
RM: *Risk Management*	15 FEB 01	FM 3-100.12 (FM 5-19.1) MCRP 5-12.1C NTTP 5-03.5 AFTTP(I) 3-2.34	Provides a consolidated multi-Service reference, addressing risk management background, principles, and application procedures. To facilitate multi-Service interoperability, it identifies and explains the risk management process and its differences and similarities as it is applied by each Service. Assessment complete, recommended to retain, will be reassessed 1 Oct 05 (18 mo); 15 Feb 07 **POC: Team G** alsag@langley.af.mil
SURVIVAL: *Multi-Service Procedures for Survival, Evasion, and Recovery* **Distribution Restricted**	19 MAR 03	FM 3-50.3 (FM 21-76-1) NTTP 3-50.3 AFTTP(I) 3-2.26	This publication provides a weather-proof, pocket-sized, quick reference guide of basic survival information to assist Service members in a survival situation regardless of geographic location. Assess: 15 Jul 04 (18mo); 1 Mar 06 (3yr) **POC: Team B** alsab@langley.af.mil
TADIL-J: *Introduction to Tactical Digital Information Link J and Quick Reference Guide*	30 JUN 00 **(Incorporating with FORSCOM JTAO Handbook)**	FM 6-24.8 (FM 6-02.241) MCRP 3-25C NTTP 6-02.5 AFTTP(I) 3-2.27	Provides a guide for warfighters with limited or no experience or background in TADIL J and needing a quick orientation for supplemental or in-depth information. TADIL J is also known in NATO as Link 16. **Current Status**: The information in this publication will be incorporated into the FORSCOM Joint Tactical Air Operations Procedural Handbook. **POC: Team C** alsac@langley.af.mil
TAGS: *Multi-Service Tactics, Techniques, and Procedures for the Theater Air Ground System*	8 DEC 03	FM 3-52.2 (FM 100-103-2) MCRP 3-25F NTTP 3-56.2 AFTTP(I) 3-2.17	This publication promotes inter-Service awareness regarding the role of airpower in support of the JFC's campaign plan, increases understanding of the air-ground system, and provides planning considerations for the conduct of air-ground operations. Assess: 1 Jun 05 (18mo); 1 Dec 06 (3yr) **POC: Team D** alsad@langley.af.mil
TACTICAL RADIOS: *Multi-Service Communications Procedures for Tactical Radios in a Joint Environment*	14 JUN 02	FM 6-02.72 (FM 11-1) MCRP 3-40.3A NTTP 6-02.2 AFTTP(I) 3-2.18	Standardizes joint operational procedures for Single-Channel Ground and Airborne Radio Systems (SINCGARS) and provides and overview of the multi-Service applications of Enhanced Position Location Reporting System (EPLARS). Assess: 1 Jun 05 (3yr) **POC: Team C** alsac@langley.af.mil
TMD IPB: *Multi-Service Tactics, Techniques, and Procedures for Theater Missile Defense Intelligence Preparation of the Battlespace*	04 MAR 02 (**Transitions to the Army in SEP 04**)	FM 3-01.16 MCRP 2-12.1A NTTP 2.01.2 AFTTP(I) 3-2.36	This publication provides a systematic and common methodology for analyzing the theater adversary missile force in its operating environment. **Current Status:** Scheduled for revision in March 2005 (3yr). (New POC is CAC/CADD, Ft. Leavenworth) **POC: Team G** alsag@langley.af.mil

ALSA PROJECTS UPDATE
CURRENT ALSA PUBLICATIONS

TITLE	DATE	PUB #	DESCRIPTION
TST: *MTTP for Targeting Time-Sensitive Targets* **Distribution Restricted –** Releasable to NATO as NATO Restricted	20 APR 04	A: FM 3-60.1 M: 3-16D N: NTTP 3-60.1 AF: AFTTP(I) 3-2.3	This publication provides the JFC, the JFC's operational staff, and components unclassified MTTP to coordinate, de-conflict, synchronize, and prosecute TSTs within any AOR. Includes OIF and OEF lessons learned, multinational and other government agency considerations. Appendix D (COMUSCENTAF Counter-SCUD CONOPS and Playbook – Secret Rel GBR/AUS), Appendix F (TST collaboration tools) and Appendix G (CGRS) available via electronic means only. Assess: 1 Oct 05 (18mo); Apr 07 (3yr) **POC TEAM F** alsaf@langley.af.mil
UXO*: Multi-Service Procedures for Unexploded Ordnance Operations (UXO)*	23 AUG 01	FM 3-100.38 MCRP 3-17.2B NTTP 3-02.4.1 AFTTP(I) 3-2.12	This publication describes hazards of unexploded explosive ordnance (UXO) sub- munitions to land operations, addresses UXO planning considerations, and describes the architecture for reporting and tracking UXO during combat and post conflict. Revision scheduled for 2004. Assess: 1 Oct 04 (3yr) **POC: Team B** alsab@langley.af.mil

NEW ALSA PROJECTS

TITLE	EST PUB DATE	PUB #	DESCRIPTION AND STATUS
DETAINEE OPERATIONS *MTTP for Detainee Operations in a Joint Environment* **Distribution Restricted**	NOV 04	A: FM 3-19.401 M: MCRP 4-11.8D N: NTTP 3-07.8 AF: AFTTP(I) 3-2.51	MTTP regarding detainee operations (unprivileged belligerents) to include transporting, transferring and holding of the high-risk detainees. **Current Status**: On hold awaiting DoD approval for release and service chaplain/legal reviews. **POC TEAM B** alsab@langley.af.mil
UHF TACSAT/ DAMA OPERATIONS	JUN 04	A: FM 6-02.90 M: MCRP 3-40.3G N: NTTP 6-02.9 AF: AFTTP(I) 3-2.53	Recent operations at JTF level have demonstrated difficulties in managing limited number of UHF TACSAT frequencies. TTP documented in this publication will improve efficiency at the planner and user levels. **Current Status**: Command Approval **POC TEAM C** alsac@langley.af.mil
Interpreter Ops	APR 04	Center for Army Lessons Learned Handbook 04-7	Team B will monitor this project for 18 months following the release of the handbook and then decide whether to develop as an MTTP or remove it as a monitored project. **Current Status:** Complete. Available electronically and will be printed as a Center for Army Lessons Learned (CALL) Handbook. **POC TEAM B** alsab@langley.af.mil
KILL BOX *MTTP for Kill Box Operations*	APR 05	N: NTTP 3-09.2.1	This MTTP assists the Services and Joint Force Commanders (JFC) in developing, establishing, and executing kill box procedures to allow rapid target engagement. This Kill Box MTTP describes timely, effective multi-Service solutions to FSCMs, ACMs, and maneuver control measures with respect to kill box procedures. **Current Status:** Program Development 2nd Joint working group held 24 Aug 04 - 27 Aug 04. **POC TEAM B** alsab@langley.af.mil
Convoy Operations	JAN 05	TBD	This publication consolidates the Services' best tactics, techniques and procedures (TTP) used in convoy operations into a single multi-Service TTP with the objective of reducing casualty rates and increasing the probability of mission success during convoy operations. This MTTP focuses on combat support and combat service support forces and provides a quick reference guide for convoy commanders and subordinates on how to plan, train, and conduct tactical convoy operations in the contemporary operating environment. **Current Status:** Program Development. Joint working group scheduled for OCT 04. **POC TEAM E** alsae@langley.af.mil

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